

FEDERAL ITEM IDENTIFICATION GUIDE

FURNACES AND SPACE HEATERS

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This Federal Item Identification Guide for Supply Cataloging is issued under the authority of Department of Defense Instruction 5025.7.

The use of this publication is mandatory for US. Federal Activities participating in Federal Catalog System Operations.

BY ORDER OF THE DIRECTOR

/s/

Commander

Defense Logistics Information Service

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GENERAL INFORMATION

1. Purpose and Scope

This Federal Item Identification Guide (FIIG) is a self-contained document for the collection, coding, transmittal, and retrieval of item characteristics and related supply management data for an item of supply for logistical use. This FIIG is to be used to describe items of supply identified by the index of approved item names appearing in this section.

2. Contents

This FIIG is comprised of the following:

- Index of Approved Item Names Covered by this FIIG
- Applicability Key Index
- Section I - Item Characteristics Data Requirements
- Section III - New text that should be here.
- Appendix A - Reply Tables
- Appendix B - Reference Drawing Groups (as applicable)
- Appendix C - Technical Data Tables (as applicable)

a. Index of Approved Item Names Covered by this FIIG:

The index lists the approved item names with definitions and item name codes as they appear in Cataloging Handbook H6, applicable to this FIIG. In addition, each name entry is assigned an applicability key for use in relating the characteristics requirements in Section I to the specific item name.

b. Applicability Key Index:

The purpose of this index is to provide the user with a ready reference for determining the specific requirements which are applicable to a given approved item name. This index lists all requirements in sequence as they appear in the FIIG. The applicability of a Master Requirement Coded requirement is indicated by the column headed by the specific item name applicability key as follows:

(1) The letter "X" indicates the requirement must be answered for a full descriptive item.

(2) The letters "AR" indicate the requirement is to be answered as required by (1) instructional notes within the FIIG; (2) when the reply is predicated on replies to a related main requirement; or (3) when an asterisk (*) is used in conjunction with the applicability key column in Section I.

(3) A blank in the column indicates the requirement is not applicable to the specific item name.

c. Section I - Item Characteristics Data Requirements:

This section contains the physical and performance characteristics requirements needed to describe and identify an item of supply. These characteristics differentiate one item from all other items of supply and are to be used to meet the needs of all supported functions. This section is arranged in columns. Identification of each column and instructions pertinent thereto are as follows:

(1) Applicability Key:

The first column shows the applicability key(s) for each requirement. It indicates whether the requirement need be satisfied for the item being identified. "ALL" indicates that the requirement must be answered for all items covered by the FIIG. One or more alphabetic character(s) or group of one or more alphabetic characters indicates a response is required when describing items with an approved item name or names represented by the key(s). An asterisk (*) used in conjunction with any applicability key indicates that the characteristic stated in the requirement may not be applicable to all items covered by the FIIG.

(2) Master Requirement Codes (MRC):

A four-position code which is assigned to a FIIG requirement for identification of the requirement, cross-referencing requirements in the various sections and appendices of the FIIG, and for mechanized processing and retrieval of FIIG generated data. Absence of a MRC for a requirement indicates a lead-in to requirements with individual MRCs in Appendix B.

(a) The coding technique for providing MULTIPLE/OPTIONAL responses will not be used for a Section I requirement assigned Mode Code A or L that leads to Appendix B sketches with dimensional requirements.

(b) Identified Secondary Address Coding:

This technique is for extending the Master Requirement Code so that a unique address is provided for each application of the requirement in relation to the item and is authorized only as instructed within the requirement. Responses coded through this technique will always consist of the following: (1) Master Requirement Codes, (2) indicator code (a single numeric character determined by the number of positions contained), (3) identified secondary address code (1 to 3-digit alphabetic codes determined by the number of predicted replies), (4) the mode code, (5) the reply code and/or clear text response, and (6) end with a record separator (*). Steps (1) through (6) are repeated for each application of the requirement.

(c) AND/OR coding:

A technique for extending the Master Requirement Code to provide a distinctive address for multiple responses to the same requirement. Responses coded through this technique will always consist of (1) Master Requirement Code, (2) mode code, (3) the response or reply code (as instructed by the requirement), (4) a single dollar sign (\$) for an OR condition, or a double dollar sign (\$\$) for an AND condition, (5) the mode code, (6) the response or reply code

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(followed by conditions (4) through (6) for each of the multiple responses) and (7) end with a record separator (*). NOTE: Apply this technique only when instructed by the requirement sample reply (e.g.).

(3) Mode Code:

A one-position alphabetic code that specifies the manner in which a response will be prepared. Each requirement assigned a MRC is also assigned a mode code. Sample replies follow each FIIG requirement displaying the proper construction of a response for the assigned mode code. The response to a requirement will always be prepared in accordance with the assigned mode code and sample reply except in the following instances:

(a) Use of E Mode Code replies is not authorized. If a reply needed to describe an item is not listed in the applicable table, contact the FIIG Initiator.

(b) Mode Code K may not be used for any requirement unless instructed by the requirement instructions.

(4) Requirement:

This portion includes the characteristics data elements and data use identifiers required to identify and differentiate one item of supply from another, narrative definitions, and explanations as to use and method of expression. Instructions for coding and preparing replies are also provided.

(5) Reply Code:

A code that represents an established authorized reply to a requirement.

d. Section III - Supplementary Technical and Supply Management Data:

This section includes those characteristics requirements necessary to support specific logistics functions other than National Stock Number assignment.

e. Appendix A - Reply Tables:

Tables of authorized replies to requirements and reply codes when the tables are too lengthy for inclusion in Section I/III, when applicable.

f. Appendix B - Reference Drawings:

This appendix contains representative illustrations which portray specific variations of one or more generic characteristics. If reference drawings contain requirements pages to be used in conjunction with illustrations for dimensioning purposes, the requirements pages will contain Master Requirement Codes, mode codes, and a statement of the requirement. A response to requirements on a requirements page is necessary only for those Master Requirement Codes applicable to the illustration selected.

g. Appendix C - Technical Data Tables:

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This appendix contains conversion charts and similar data pertinent to the requirements in Section I/III, when applicable.

3. Enter administrative MRC CLQL immediately following the last FIIG requirement reply, as instructed below:

<u>MRC</u>	<u>Mode</u> <u>Code</u>	<u>Requirement</u>	<u>Example</u>
CLQL	G	COLLOQUIAL NAME (common usage name by which an item is known)	CLQLGWOVEN WIRE CLOTH*

4. Special Instructions and Indicator Definitions

a. Measurements:

Unless otherwise indicated within a requirement example, enter all measurements in decimal form, carried to the nearest three decimal places, with a minimum of one digit preceding the decimal. For SI (metric), enter all measurements with a minimum of one digit before and after the decimal. For fraction to decimal conversion, see Appendix C.

b. Indicators:

A cross hatch (#) following an AIN, MRC, Reply Code or Drawing Number indicates for "ALL EXCEPT USA" use only.

5. Indexes

a. Index of Data Requirements

This index is arranged in alphabetic sequence by Master Requirement Code, cross-referenced to the applicable data requirement and page number(s).

b. Index of Approved Item Names

This index is arranged in alphabetic sequence referenced to Applicability Key.

c. Applicability Key Index

This index is arranged in Applicability Key Sequence.

6. Maintenance

Requests for revisions and other changes will be directed to:

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<u>Approved Item Name</u>	<u>INC</u>	<u>App Key</u>
FURNACE, WARM AIR	09198	A
<p>A central heating appliance consisting of combustion chamber and secondary heat transferring surfaces inclosed within a jacket or casing, designed for burning various types of fuel. The resultant heat, being absorbed by air circulated over the heated surfaces by means of gravity or forced air circulation, may be distributed to various rooms of a building by the attachment of ducts and/or pipes. See also HEATER(1), SPACE.</p> <p>Heater</p> <p>1. A device designed for and used as a direct producer of heat necessary to raise the temperature of a body or a mass and either a solid or a fluid.</p>		
HEATER (1), AIRCRAFT	04712	B
<p>A heater used to raise the temperature of the air in the interior of aircraft in which it is installed. Circulation of the heated air may be achieved by an integral blower or fan. Excludes HEATER PACKAGE, AIRCRAFT, external type heaters, and portable type heaters.</p>		
HEATER, CONVECTION, STEAM-HOT WATER	16506	C
<p>A heat transferring unit, inclosed in a cabinet designed to warm a stream of air by convection as it circulates over the heating elements rather than by direct radiation. Excludes RADIATOR, HEATING.</p>		
HEATER (1), DUCT TYPE, PORTABLE	13028	D
<p>A heater equipped with integral connection(s) for attaching duct(s) to direct heat to engine surface, railroad cars, warehouses, tents, and the like. It is equipped with a blower (fan) and must be mounted on skids, wheels, and the like or capable of being hand-carried. Excludes HEATER(1), SPACE.</p>		
HEATER (1), DUCT TYPE, STATIONARY	17014	E
<p>A device capable of producing heat from gas, liquid fuel, or an electrical heating element, designed for permanent installation in sheet metal ducts of a forced air circulating system. It consists of (1) a finned, steel burner tube, a combustion air blower, a control panel, and a constant level fuel supply system, or (2) a device having a heating element which when connected to an electrical source, directly imparts heat. It may be provided with a flanged outer casing to facilitate mounting in planned or existing duct work. Circulation of the heated air is achieved by use of a blower or fan not integral with the heating unit.</p>		
HEATER (1), SPACE	03228	F
<p>A device designed to burn various types of fuel within an inclosure which protects and confines the fire. It is used for the purpose of raising the temperature of the air in its immediate vicinity. The inclosure may be vented. Excludes HEATER(1), DUCT TYPE, PORTABLE and HEATER, SPACE, ELECTRIC.</p>		

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<u>Approved Item Name</u>	<u>INC</u>	<u>App Key</u>
HEATER, SPACE, ELECTRIC	03232	G
A device having a heating element which when connected to an electrical source, directly imparts heat. Circulation of the heated air may be achieved by an integral blower or fan. For space heaters other than electric, see HEATER(1), SPACE.		
HEATER, VEHICULAR, COMPARTMENT	17648	H
A device designed to heat the interior of a vehicle by utilizing the heat from the engine coolant system or a liquid fuel type burner. Circulation of the heated air is achieved by use of a blower or fan which may or may not be an integral part of the heating unit. Excludes HEATER(1), AIRCRAFT and railway heaters.		
HEATER (1), VENTILATION, DUCT TYPE	07531	J
A heat transferring unit, utilizing a separate source of steam or hot water as the heat transfer medium. It consists of finned parallel tubes joined together by a header or headers and is designed for installation in the ducts of a forced air circulating system. It may be provided with a flanged outer casing to facilitate mounting of the unit in planned or existing duct work. Circulation of the heated air is achieved by use of a blower or fan not integral with the heating unit.		
RADIATOR, HEATING	04839	K
A heat tranferring unit designed to transfer heat to surrounding air by radiation. The unit is exposed directly to the space served and it is generally connected to some type of heat generating unit, such as a steam or hot water heating boiler, but may have an integral gas or electric heating unit. Excludes HEATER, CONVECTION, STEAM-HOT WATER.		
UNIT HEATER, AIR CIRCULATING, STEAM-HOT WATER	04874	L
A heating device which is connected to a central source of hot water or steam, for the purpose of distributing heat, by means of a motor-driven fan, throughout a room or building. By introducing outside air, it may also be utilized for ventilating purposes or a combination of heating and ventilating.		

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	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>K</u>
NAME	X	X	X	X	X	X	X	X	X	X
CQXD	X	X	X	X	X	X	X	X	X	X
ACDC	AR	AR		AR	AR	AR	AR	AR		AR
ELEC	AR	AR		AR	AR	AR	AR	AR		AR
FREQ	AR	AR		AR	AR	AR	AR	AR		AR
FAAZ	AR	AR		AR	AR	AR	AR	AR		AR
AMPS	AR	AR		AR	AR	AR	AR	AR		AR
BDXJ	X	X	X	X	X	X	X	X	X	X
ABAM	X	X	X	X	X	X	X	X	X	X
ABAN			X					AR	X	AR
CSGC	X	AR		AR	AR	X		AR		AR
CRJT	AR	AR		AR	AR	AR		AR		AR
FUEL	X	AR		AR	AR	X		AR		AR
BLJC	X	AR		AR	AR	X		AR		AR
AAXX	X	X	X	X	X	X	X	X	X	X
HGTH	X	X	X	X	X	X	X	X	X	X
ABGL	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
AEJZ	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ABMZ	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ABAT					AR				AR	
ABAU					AR				AR	
ABAW	X	X	X	X	AR		X	X	X	
ABAQ	AR	AR	AR	AR	AR		AR	AR	AR	
ABAX	AR	AR	AR	AR	AR		AR	AR	AR	
ABAY	AR	AR	AR	AR	AR		AR	AR	AR	
ABAZ	AR	AR	AR	AR	AR		AR	AR	AR	
ABBA	AR	AR		AR	AR	AR	AR	AR		
NMBR	AR	AR		AR	AR	AR	AR	AR		
ABBB	AR	AR		AR	AR	AR	AR	AR		
ABBD	AR	AR		AR	AR	AR	AR	AR		
AKDJ	AR	AR		AR	AR	AR	AR	AR		
ABBE	AR	AR		AR	AR	AR	AR	AR		
ABBF	AR	AR		AR			AR			
ABBG	AR	AR					AR	AR		
CQSJ	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
SFTT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
STDC	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ABFG	AR	AR		AR	AR	AR	AR	AR		AR
ALYC	X	X	X	X	X	X	X	X	X	X
ABBK	AR				AR					
CQTY	AR			AR	AR	AR		AR		AR
FEAT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
TEST	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
SPCL	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ZZZK	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ZZZT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ZZZW	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ZZZX	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR

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ZZZY	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
CRTL	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
PRPY	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ENAC	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ELRN	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ELCD	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
CBME	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
BBRG	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
BBRH	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
PRMT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
PMWT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
PMLC	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
SUPP	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
FCLS	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
FTLD	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
TMDN	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
RTSE	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
RDAL	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
NTRD	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ZZZP	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
ABFH	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
AGAV	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
HZRD	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
CXCY	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR

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	<u>L</u>
NAME	X
CQXD	X
ACDC	AR
ELEC	AR
FREQ	AR
FAAZ	AR
AMPS	AR
BDXJ	X
ABAM	X
ABAN	X
AAXX	X
HGTH	X
ABGL	AR
AEJZ	AR
ABMZ	AR
ABAW	X
ABAQ	AR
ABAX	AR
ABAY	AR
ABAZ	AR
ABBA	AR
NMBR	AR
ABBB	AR
ABBD	AR
AKDJ	AR
ABBE	AR
ABBF	AR
ABBG	AR
CQSJ	AR
SFTT	AR
STDC	AR
ABFG	AR
ALYC	X
FEAT	AR
TEST	AR
SPCL	AR
ZZZK	AR
ZZZT	AR
ZZZW	AR
ZZZX	AR
ZZZY	AR
CRTL	AR
PRPY	AR
ENAC	AR
ELRN	AR
ELCD	AR
CBME	AR
BBRG	AR
BBRH	AR
PRMT	AR
PMWT	AR
PMLC	AR
SUPP	AR

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FCLS	AR
FTLD	AR
TMDN	AR
RTSE	AR
RDAL	AR
NTRD	AR
ZZZP	AR
ABFH	AR
AGAV	AR
HZRD	AR
CXCY	AR

SECTION I

APP Key	MRC	Mode Code	Requirements
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ALL

NAME	D	ITEM NAME
------	---	-----------

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section. (e.g., NAMED17014*)

ALL

CQXD	J	HEAT DELIVERY RATE
------	---	--------------------

Definition: THE RATE OF HEAT DELIVERY OF THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., CQXDJA1500.0*; CQXDJB378.0*)

For items indicating watts, Direct Radiation, and BTU/H, see Appendix C, Table 1 for conversion.

Give the total BTU/H output of the item being described rather than the per foot BTU/H rating of a finned tube or baseboard type heater.

<u>REPLY CODE</u>	<u>REPLY (AP36)</u>
A	BRITISH THERMAL UNIT (BTU/H)
B	KILOGRAM-CALORIE

A*, B*, D*, E*, F*, G*, H*, K*, L*

ACDC	D	CURRENT TYPE
------	---	--------------

Definition: INDICATES THE TYPE OF CURRENT WHETHER ALTERNATING, DIRECT, OR BOTH.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ACDCDC*; ACDCDB\$DC*)

<u>REPLY CODE</u>	<u>REPLY (AB62)</u>
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APP Key	MRC	Mode Code	Requirements
		B	AC
		C	DC

NOTE FOR MRCS ELEC, FREQ, FAAZ, AND AMPS: IF REPLY CODE B IS ENTERED FOR MRC ACDC, REPLY TO MRCS ELEC, FREQ, FAAZ, AND AMPS. IF REPLY CODE C IS ENTERED FOR MRC ACDC, REPLY TO MRCS ELEC AND AMPS.

A*, B*, D*, E*, F*, G*, H*, K*, L* (See Note Above)

ELEC B VOLTAGE IN VOLTS

Definition: THE TOTAL ELECTRICAL VOLTAGE.

Reply Instructions: Enter the numeric value. (e.g., ELECB12.0*; ELECB110.0\$B440.0*; ELECB110.0\$B220.0*)

A*, B*, D*, E*, F*, G*, H*, K*, L* (See Note Preceding MRC ELEC)

FREQ B FREQUENCY IN HERTZ

Definition: THE CYCLES PER SECOND (HERTZ) OF THE ALTERNATING CURRENT.

Reply Instructions: Enter the numeric value. (e.g., FREQB50.0*; FREQB50.0\$B60.0*)

A*, B*, D*, E*, F*, G*, H*, K*, L* (See Note Preceding MRC ELEC)

FAAZ D PHASE

Definition: THE NUMBER OF ALTERNATING CURRENT PHASES.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., FAAZDA*; FAAZDA\$DC*)

<u>REPLY CODE</u>	<u>REPLY (AD02)</u>
A	SINGLE
C	THREE

A*, B*, D*, E*, F*, G*, H*, K*, L* (See Note Preceding MRC ELEC)

AMPS B CURRENT RATING IN AMPS

Definition: THE ELECTRICAL CURRENT RATING, EXPRESSED IN AMPERES.

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APP		Mode	
Key	MRC	Code	Requirements

Reply Instructions: Enter the numeric value. Enter multiple replies in the same sequence as MRC ELEC. (e.g., AMPSB1.5*; AMPSB3.0\$\$B1.5*)

ALL

BDXJ	D	HEATING ELEMENT TYPE
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Definition: INDICATES THE TYPE OF HEATING ELEMENT PROVIDED.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., BDXJDABM*; BDXJDABQ\$\$DABR*; BDXJDABS\$DABT*)

<u>REPLY CODE</u>	<u>REPLY (AN01)</u>
ABQ	BURNER
ABR	COMBUSTION CHAMBER
ABM	ELECTRIC NONIMMERSION
ABS	HOT WATER COIL
ABT	STEAM COIL

ALL

ABAM	D	HEAT MEDIUM TYPE
------	---	------------------

Definition: INDICATES THE HEAT MEDIUM TYPE FOR WHICH THE UNIT IS DESIGNED.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABAMDAAH*; ABAMDAAH\$DAAE*)

<u>REPLY CODE</u>	<u>REPLY (AA94)</u>
AAG	AIR
AAH	HOT WATER
AAE	STEAM

C, H*, J, K*, L

ABAN	J	MAXIMUM PRESSURE LIMIT
------	---	------------------------

Definition: INDICATES THE LIMIT OF THE MAXIMUM PRESSURE FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., ABANJG90.0*; ABANJB6.3*)

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APP Key	MRC	Mode Code	Requirements
		<u>REPLY CODE</u>	<u>REPLY (AA95)</u>
		B	KILOGRAMS PER SQUARE CENTIMETER GAGE
		G	POUNDS PER SQUARE INCH GAGE

A, B*, D*, E*, F, H*, K*

CSGC D FUEL FEED METHOD

Definition: THE MEANS BY WHICH THE FUEL IS FED TO THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., CSGCDAH*)

<u>REPLY CODE</u>	<u>REPLY (AL50)</u>
A	ANY ACCEPTABLE
AD	EXTERNAL PRESSURE
AE	EXTERNAL PUMP
AB	GRAVITY
AF	INTERNAL PUMP
AG	MANUAL
AH	STOKER
AJ	WICK

A*, B*, D*, E*, F*, H*, K*

CRJT J INTEGRAL FUEL TANK CAPACITY

Definition: THE AMOUNT OF FUEL THAT THE INTEGRAL TANK WILL HOLD.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., CRJTJGL50.0*; CRJTJLT189.3*)

For items indicating British Imperial gallons, see Appendix C, Table 2 for conversion.

<u>REPLY CODE</u>	<u>REPLY (AN64)</u>
GL	GALLONS
LT	LITERS

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SECTION I

APP Key	MRC	Mode Code	Requirements
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A, B*, D*, E*, F, H*, K*

FUEL D FUEL TYPE

Definition: INDICATES THE TYPE OF FUEL(S) FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable REPLY CODE from [Appendix A](#), Table 1. (e.g., FUEL DAB*; FUEL DBT\$DBC*; FUEL DAR\$DAH*)

A, B*, D*, E*, F, H*, K*

BLJC D IGNITION METHOD

Definition: THE MEANS USED FOR PURPOSES OF IGNITING.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., BLJC DAAF*)

REPLY CODE	REPLY (AC58)
ABZ	ELECTRODE
ACA	GLOW PLUG
	Hand (use REPLY CODE AAF)
AAF	MANUAL
ACB	PILOT

ALL

AAXX D MOUNTING TYPE

Definition: INDICATES THE TYPE OF MOUNT UTILIZED TO SUPPORT THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from [Appendix A](#), Table 2. (e.g., AAXX DACM*; AAXX DACK\$DAC*)

NOTES FOR MRCS HGTH, ABGL, AEJZ, AND ABMZ: REFER TO THE OVERALL DIMENSIONS OF THE HEATER, EXCLUDING ALL MOUNTINGS, PLUMBING, AIR DUCTS, GRILLS, ETC., THAT ARE NOT AN INTEGRAL PART OF THE HEATER. FOR CYLINDRICAL TYPE HEATERS, A REPLY SHOULD BE ENTERED FOR MRCS HGTH AND ABMZ.

ALL (See Note Above)

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
	HGTH	J	HEIGHT

Definition: A MEASUREMENT FROM THE BOTTOM TO THE TOP OF AN OBJECT, IN DISTINCTION FROM DEPTH.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., HGTHJAA17.875*; HGTHJLA454.0*; HGTHJAB15.312\$\$JAC15.438*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL * (See Note Preceding MRC HGTH)

ABGL J WIDTH

Definition: A MEASUREMENT TAKEN AT RIGHT ANGLES TO THE LENGTH OF AN ITEM, IN DISTINCTION FROM THICKNESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABGLJAA14.250*; ABGLJLA362.0*; ABGLJAB8.188\$\$JAC8.312*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL * (See Note Preceding MRC HGTH)

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
	AEJZ	J	DEPTH

Definition: A LINEAR MEASUREMENT FROM THE SURFACE TO A SPECIFIED INNER POINT ON AN ITEM, IN DISTINCTION FROM HEIGHT.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AEJZJAA12.125*; AEJZJLA308.0*; AEJZJAB10.125\$\$JAC10.250*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL * (See Note Preceding MRC HGTH)

ABMZ J DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A CIRCULAR FIGURE OR BODY, AND TERMINATES AT THE CIRCUMFERENCE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABMZJAA17.875*; ABMZJLA454.0*; ABMZJAB15.188\$\$JAC15.312*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
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E*, J*

ABAT J DUCT HEIGHT

tions: A MEASUREMENT FROM THE BOTTOM TO THE TOP OF THE DUCT, IN DISTINCTION FROM DEPTH.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., ABATJA15.250*; ABATJL387.3*)

<u>REPLY CODE</u>	<u>REPLY (AA05)</u>
A	INCHES
L	MILLIMETERS

E*, J*

ABAU J DUCT WIDTH

Definition: A MEASUREMENT TAKEN AT RIGHT ANGLES TO THE LENGTH OF THE DUCT, IN DISTINCTION FROM HEIGHT.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., ABAUJA18.750*; ABAUJL476.2*)

<u>REPLY CODE</u>	<u>REPLY (AA05)</u>
A	INCHES
L	MILLIMETERS

A, B, C, D, E*, G, H, J, L

ABAW A HEAT OUTLET QUANTITY

Definition: THE NUMBER OF HEAT OUTLETS INCLUDED ON THE ITEM.

Reply Instructions: Enter the quantity. (e.g., ABAWA4*)

NOTE FOR MRCS ABAQ, ABAX, ABAY, AND ABAZ: IF A REPLY IS ENTERED FOR MRC ABAW, REPLY TO MRCS ABAX, ABAY, AND ABAZ. IF REPLY TO MRC ABAW IS ONE, DO NOT REPLY TO MRC ABAQ. IF REPLY TO MRC ABAW IS MORE THAN ONE, A REPLY MUST BE ENTERED FOR MRC ABAQ.

A*, B*, C*, D*, E*, G*, H*, J*, L* (See Note Above)

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
	ABAQ	D	OUTLET POSITION

Definition: THE POSITION OF THE OUTLET(S) ON THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABAQDA*)

If outlets are horizontal and vertical (top or bottom and side), enter REPLY CODE B.

If item is equipped with three outlets on a horizontal plane (front, back, and side) or four outlets (front, back, and each side), enter REPLY CODE B.

If item is equipped with two outlets on a vertical plane (top and bottom) or two outlets on a horizontal plane (opposite sides), enter REPLY CODE C.

<u>REPLY CODE</u>	<u>REPLY (AA97)</u>
Z	ANY ACCEPTABLE
A	IN THE SAME DIRECTION
B	90 DEG APART
C	180 DEG APART

A*, B*, C*, D*, E*, G*, H*, J*, L* (See Note Preceding MRC ABAQ)

ABAX	D	HEAT DELIVERY DIRECTION
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Definition: THE DIRECTION IN WHICH THE HEAT IS DISCHARGED FROM THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABAXDB*; ABAXDA\$\$DB*; ABAXDA\$DB*)

<u>REPLY CODE</u>	<u>REPLY (AA99)</u>
A	HORIZONTAL
B	VERTICAL

A*, B*, C*, D*, E*, G*, H*, J*, L* (See Note Preceding MRC ABAQ)

ABAY	D	HEAT DISCHARGE OUTLET TYPE
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Definition: INDICATES THE TYPE OF OUTLET(S) PROVIDED FOR THE DISCHARGE OF HEAT.

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SECTION I

APP Key	MRC	Mode Code	Requirements
Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABAYDB*)			

All register type outlets are stationary.

<u>REPLY CODE</u>	<u>REPLY (AB00)</u>
A	ADJUSTABLE
B	STATIONARY

A*, B*, C*, D*, E*, G*, H*, J*, L* (See Note Preceding MRC ABAQ)

ABAZ D HEAT DIRECTING DEVICE

Definition: INDICATES THE DEVICE(S) PROVIDED FOR THE PURPOSE OF DIRECTING THE FLOW OF HEAT.

Reply Instructions: Enter the applicable REPLY CODE from [Appendix A](#), Table 4. (e.g., ABAZDC*; ABAZDB\$DL*)

A*, B*, D*, E*, F*, G*, H*, L*

ABBA D AIR CIRCULATION DEVICE

Definition: THE MECHANISM USED FOR AIR CIRCULATION.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABBADB*; ABBADB\$DC*)

<u>REPLY CODE</u>	<u>REPLY (AB02)</u>
F	BLOWER WHEEL
B	PROPELLER FAN
C	SQUIRREL CAGE BLOWER

NOTE FOR MRCS NMBR, ABBB, ABBD, AKDJ, AND ABBE: IF A REPLY IS ENTERED FOR MRC ABBA, REPLY TO MRCS NMBR, ABBB, ABBD, AKDJ, AND ABBE.

A*, B*, D*, E*, F*, G*, H*, L* (See Note Above)

NMBR A QUANTITY

Definition: A NUMERIC VALUE WHICH REPRESENTS A POSITIVE WHOLE VALUE WITHOUT REGARD TO ANY UNIT OF MEASURE.

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SECTION I

APP		Mode	
Key	MRC	Code	Requirements

Reply Instructions: Enter the quantity. (e.g., NMBRA2*)

A*, B*, D*, E*, F*, G*, H*, L* (See Note Preceding MRC NMBR)

ABBB D SPEED AJUSTMENTS

Definition: THE DIFFERENT SPEEDS AT WHICH THE ITEM MAY BE OPERATED.

Reply Instructions: Enter the applicable REPLY CODE from [Appendix A](#), Table 3. (e.g., ABBBDC*)

A*, B*, D*, E*, F*, G*, H*, L* (See Note Preceding MRC NMBR)

ABBD J MAXIMUM AIR FLOW RATE

Definition: THE MAXIMUM RATED CAPACITY OF AIR FLOW MOVED THROUGH THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the manufacturer's per minute rating at Standard Temperature and Pressure (STP). STP = 14.7 PSIA at 79 deg F/21 deg C. (e.g., ABBDJA500.0*; ABBDJC14.2*)

For items that do not require a rating, change the Mode Code to K and enter REPLY CODE N. (e.g., ABBDKN*)

<u>REPLY CODE</u>	<u>REPLY (AC64)</u>
A	CUBIC FEET PER MINUTE
C	CUBIC METERS PER MINUTE

A*, B*, D*, E*, F*, G*, H*, L* (See Note Preceding MRC NMBR)

AKDJ D PRIME MOVER TYPE

Definition: INDICATES THE TYPE OF PRIME MOVER INCLUDED WITH THE UNIT.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., AKDJDAC*; AKDJDAC\$DAE*)

<u>REPLY CODE</u>	<u>REPLY (AG27)</u>
AC	DIESEL ENGINE
AD	ELECTRIC MOTOR

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SECTION I

APP Key	MRC	Mode Code	Requirements
		AF	GAS TURBINE
		AE	GASOLINE ENGINE
		AG	HAND CRANK

A*, B*, D*, E*, F*, G*, H*, L* (See Note Preceding MRC NMBR)

ABBE D CIRCULATED AIR TYPE

Definition: INDICATES THE TYPE OF AIR THE ITEM IS DESIGNED TO CIRCULATE.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABBEDA*; ABBEDC\$DA*)

<u>REPLY CODE</u>	<u>REPLY (AB05)</u>
C	COOLING
A	HEATED

A*, B*, D*, G*, L*

ABBF D AIR FILTER TYPE

Definition: INDICATES THE TYPE OF AIR FILTER INCLUDED ON THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABBFDB*; ABBFDD\$DE*)

<u>REPLY CODE</u>	<u>REPLY (AB06)</u>
B	AUTOMATIC ADVANCE FILTERING ROLL
C	ELECTRONIC
D	REPLACEABLE PREFORMED (reusable, disposable)
E	WATER WASH

A*, B*, G*, H*, L*

ABBG D VENTILATION DAMPER TYPE

Definition: INDICATES THE TYPE OF DAMPER PROVIDED TO CONTROL VENTILATION.

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SECTION I

APP Key	MRC	Mode Code	Requirements
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Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABBGDAD*; ABBGDAD\$DAE*)

REPLY CODE

AD
AE

REPLY (AA77)

AUTOMATIC
MANUAL

ALL *

CQSJ D INCLOSURE MATERIAL

Definition: THE CHEMICAL COMPOUND OR MECHANICAL MIXTURE PROPERTIES OF WHICH THE INCLOSURE IS FABRICATED.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., CQSJDALA000*; CQSJDALA000\$\$DCUA000*; CQSJDALA000\$DCUB000*)

Inclosure is the structural portion of a furnace, heater, or heat exchanging unit which surrounds the heating element or heat exchanger. It shall be constructed to encompass such items of structural design as jackets, cabinets, casings, and the like.

REPLY
CODE

ALA000
A

CUA000
CUB000

FEB000
STA000

STB000

REPLY (MA01)

ALUMINUM
ANY ACCEPTABLE
Brass (use REPLY CODE CUB000)
COPPER
COPPER ALLOY
Copper and Aluminum (use Reply Codes ALA000 and CUA000)
IRON CAST
STEEL
Steel, ASTM A93 (use REPLY CODE STA000)
STEEL CORROSION RESISTING
Steel, QQ-S-775, Type 1, Class E (use REPLY CODE STA000)

ALL *

SFTT D SURFACE TREATMENT

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
			<p>Definition: THE METALLIC, NONMETALLIC, AND/OR CHEMICAL PROPERTIES WITH WHICH THE ITEM IS PLATED, DIPPED, AND/OR COATED. THE TREATMENT IS DESIGNED TO PROTECT THE SURFACE(S) AND CANNOT BE WIPED OFF.</p> <p>Reply Instructions: Enter the applicable REPLY CODE from Appendix A, Table 5. (e.g., SFTTDCDA000*; SFTTDXXB000\$DCDA000*; SFTTDCDA000\$DCMB000*)</p>

ALL *

STDC J SURFACE TREATMENT DOCUMENT AND CLASSIFICATION

Definition: THE SPECIFICATION, STANDARD, OR MANUFACTURERS REFERENCE, AND THE CLASSIFICATION DESIGNATION, SUCH AS TYPE, CLASS, GRADE, AND THE LIKE, THAT IDENTIFIES THE SURFACE TREATMENT MATERIAL.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the document designator and classification.

(e.g., STDCJBAQQ-P-416,TYPE 1,CLASS 1*;

STDCJDBMIL-C-13924,CLASS 1\$JBCQQ-P-416,TYPE 1,CLASS 1*;

STDCJBAQQ-P-416,TYPE 1,CLASS 1\$JBAQQ-C-320,CLASS 1,TYPE 1*)

Table 1

<u>REPLY CODE</u>	<u>REPLY (AP33)</u>
G	ASSN STD
B	FED SPEC
C	FED STD
F	MFR REF
D	MIL SPEC
E	MIL STD
H	NATIONAL SPEC

Table 2

<u>REPLY CODE</u>	<u>REPLY (AP39)</u>
G	ALL TREATMENT RESPONSES (use only when all treatment is controlled by the same document and classifications are identical)
A	SINGLE TREATMENT RESPONSE
B	1ST TREATMENT RESPONSE

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SECTION I

APP Key	MRC	Mode Code	Requirements
		C	2ND TREATMENT RESPONSE
		D	3RD TREATMENT RESPONSE
		E	4TH TREATMENT RESPONSE
		F	5TH TREATMENT RESPONSE

A*, B*, D*, E*, F*, G*, H*, K*, L*

ABFG D RADIO INTERFERENCE SUPPRESSION TYPE

Definition: INDICATES THE TYPE OF DEVICE(S) INSTALLED ON OR AROUND THE EQUIPMENT WHICH ELIMINATES UNDESIRABLE RADIO INTERFERENCE WAVES.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABFGDC*)

<u>REPLY CODE</u>	<u>REPLY (AB29)</u>
B	AF, MIL-STD-826, RADIO SUPPRESSION
A	ANY ACCEPTABLE
C	ARMY, MIL-E-53301, RADIO SUPPRESSION
K	ARMY, MIL-S-10379, RADIO SUPPRESSION
J	ARMY, MIL-STD-461, RADIO SUPPRESSION
L	JANITROL AERO DIV. PART NO. 2793-4, RADIO SUPPRESSION
D	NAVY, MIL-I-16910, RADIO SUPPRESSION

ALL

ALYC D OPERATING CONTROL TYPE

Definition: INDICATES THE TYPE OF DEVICE WHICH CONTROLS THE OPERATION OF THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ALYCDFM*; ALYCDA B\$\$DAC*)

<u>REPLY CODE</u>	<u>REPLY (AH83)</u>
A	ANY ACCEPTABLE
FK	AUTOMATIC CONTROL SWITCH
AB	HAND SWITCH
FL	MAGNETIC CONTROL SWITCH
FM	SEMI-AUTOMATIC
FN	THERMAL SWITCH

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SECTION I

APP Key	MRC	Mode Code	Requirements
		AC	THERMOSTATIC

A*, E*

ABBK D HUMIDITY CONTROL TYPE

Definition: INDICATES THE TYPE OF CONTROL DESIGNED TO REGULATE THE MOISTURE IN THE AIR.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ABBKDAD*)

<u>REPLY CODE</u>	<u>REPLY (AA77)</u>
AD	AUTOMATIC
AE	MANUAL

A*, D*, E*, F*, H*, K*

CQTY J FUEL CONSUMPTION RATE PER HOUR

Definition: THE AMOUNT OF FUEL THE ITEM IS RATED TO CONSUME PER HOUR.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the fuel consumption rate per hour at Standard Temperature and Pressure (STP). (e.g., CQTYJAF25.0*; CQTYJCC94.6*)

For items that do not require a rating, change the Mode Code to K and enter REPLY CODE N. (e.g., CQTYKN*)

<u>REPLY CODE</u>	<u>REPLY (AG67)</u>
CY	CUBIC FEET
LD	CUBIC METERS
AF	GALLONS
AJ	KILOGRAMS
CC	LITERS
AS	POUNDS

ALL*

FEAT G SPECIAL FEATURES

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
<p>Definition: THOSE UNUSUAL OR UNIQUE CHARACTERISTICS OR QUALITIES OF AN ITEM NOT COVERED IN THE OTHER REQUIREMENTS AND WHICH ARE DETERMINED TO BE ESSENTIAL FOR IDENTIFICATION.</p> <p>Reply Instructions: Enter the reply in clear text. Separate multiple replies with a semicolon. (e.g., FEATGADJUSTABLE NOSE CLIP*; FEATGADJUSTABLE NOSE PIECE; DISPOSABLE*)</p>			

ALL*

TEST J TEST DATA DOCUMENT

Definition: THE SPECIFICATION, STANDARD, DRAWING, OR SIMILAR INSTRUMENT THAT SPECIFIES ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS OR TEST CONDITIONS UNDER WHICH AN ITEM IS TESTED AND ESTABLISHES ACCEPTABLE LIMITS WITHIN WHICH THE ITEM MUST CONFORM IDENTIFIED BY AN ALPHABETIC AND/OR NUMERIC REFERENCE NUMBER. INCLUDES THE COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE OF THE ENTITY CONTROLLING THE INSTRUMENT.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the 5-position CAGE Code, a dash, and the document identification number.

(e.g., TESTJA12345-CWX654321*;

TESTJA1234A-654321\$\$JB5556A-663654*;

TESTJAA2345-654321\$JB55566-663654*)

<u>REPLY CODE</u>	<u>REPLY (AC28)</u>
A	SPECIFICATION (Includes engineering type bulletins, brochures, etc., that reflect specification type data in specification format; excludes commercial catalogs, industry directories, and similar trade publications, reflecting general type data on certain environmental and performance requirements and test conditions that are shown as "typical," "average," "nominal," etc.)
B	STANDARD (Includes industry or association standards, individual manufacturer standards, etc.)
C	DRAWING (This is the basic governing drawing, such as a contractor drawing, original equipment manufacturer drawing, etc.; excludes any specification, standard, or other document that may be referenced in a basic governing drawing)

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SECTION I

APP Key	MRC	Mode Code	Requirements
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ALL*

SPCL G SPECIAL TEST FEATURES

Definition: TEST CONDITIONS AND RATINGS, OR ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS THAT ARE DIFFERENT, MORE CRITICAL, OR MORE SPECIFIC THAN THOSE SPECIFIED IN A GOVERNING TEST DATA DOCUMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SPCLGSELECTED AND TESTED FOR NAVIGATIONAL SYSTEMS*)

ALL*

ZZZK J SPECIFICATION/STANDARD DATA

Definition: THE DOCUMENT DESIGNATOR OF THE SPECIFICATION OR STANDARD WHICH ESTABLISHED THE ITEM OF SUPPLY.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the Commercial and Government Entity (CAGE) Code of the entity controlling the document, a dash, and the document designator. The agency that controls the limited coordination document must be preceded and followed by a slash following the designator. The word canceled or superseded must be preceded and followed by a slash for the designator. Professional and industrial association specifications/standards are differentiated from a manufacturer's specification in that the data has been coordinated and published by the professional and industrial association. Include amendments and revisions where applicable.

(e.g., ZZZKJT81337-30642B*;

ZZZKJS81349-MIL-D-180 REV1/CANCELED/*;

ZZZKJP80205-NAS1103*;

ZZZKJS81349-MIL-C-1140C/CE/*;

ZZZKJT81337-30642B\$\$JP80205-NAS1103*)

REPLY
CODE

S
T

REPLY (AN62)

GOVERNMENT SPECIFICATION
GOVERNMENT STANDARD

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
		D	MANUFACTURERS SOURCE CONTROL
		R	MANUFACTURERS SPECIFICATION
		N	MANUFACTURERS SPECIFICATION CONTROL
		M	MANUFACTURERS STANDARD
		B	NATIONAL STANDARD/SPECIFICATION
		A	PROFESSIONAL/INDUSTRIAL ASSOCIATION SPECIFICATION
		P	PROFESSIONAL/INDUSTRIAL ASSOCIATION STANDARD

NOTE FOR MRC ZZZT: IF THE SPECIFICATION/STANDARD CITED IN REPLY TO MRC ZZZK IS NONDEFINITIVE, REPLY TO MRC ZZZT. THIS REPLY IS THE DATA WHICH IS NOT RECORDED IN SEGMENT C.

ALL * (See Note Above)

ZZZT J NONDEFINITIVE SPEC/STD DATA

Definition: THE NUMBER, LETTER, OR SYMBOL THAT INDICATES THE TYPE, STYLE, GRADE, CLASS, AND THE LIKE, OF AN ITEM IN A NONIDENTIFYING SPECIFICATION OR STANDARD.

Reply Instructions: Enter the applicable REPLY CODE from [Appendix A](#), Table 6, followed by the appropriate number, letter, or symbol. (e.g., ZZZTJTY1*; ZZZTJTY1\$JSTA*; ZZZTJTY1\$JSTA*)

ALL*

ZZZW G DEPARTURE FROM CITED DOCUMENT

Definition: THE TECHNICAL DIFFERENTIATING CHARACTERISTIC(S) OF AN ITEM OF SUPPLY WHICH DEPART(S) FROM THE TEXT OF A SPECIFICATION OR A STANDARD IN THAT IT REPRESENTS A SELECTION OF CHARACTERISTICS STATED IN THE SPECIFICATION OR STANDARD AS BEING OPTIONAL, OR A VARIATION FROM ONE OR MORE OF THE STATED CHARACTERISTICS, OR AN ADDITIONAL CHARACTERISTIC NOT STATED IN THE SPECIFICATION OR STANDARD.

Reply Instructions: Enter the reply in clear text. (e.g., ZZZWGAS MODIFIED BY MATERIAL*)

ALL*

ZZZX G DEPARTURE FROM CITED DESIGNATOR

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SECTION I

APP Key	MRC	Mode Code	Requirements
<p>Definition: THE VARIATION WHEN THE ITEM IS IN CONFORMITY WITH A TYPE DESIGNATOR COVERED BY A SPECIFICATION OR STANDARD, EXCEPT IN REGARD TO ONE OR MORE TECHNICAL DIFFERENTIATING CHARACTERISTICS.</p> <p>Reply Instructions: Enter the reply in clear text. (e.g., ZZZXGAS MODIFIED BY MATERIAL*)</p>			
ALL*			
	ZZZY	G	REFERENCE NUMBER DIFFERENTIATING CHARACTERISTICS
<p>Definition: A FEATURE OF THE ITEM OF SUPPLY WHICH MUST BE SPECIFICALLY RECORDED WHEN THE REFERENCE NUMBER COVERS A RANGE OF ITEMS.</p> <p>Reply Instructions: Enter the reply in clear text. (e.g., ZZZYGCOLOR CODED LEADS*; ZZZYGAS DIFFERENTIATED BY MATERIAL*)</p>			
ALL*			
	CRTL	A	CRITICALITY CODE JUSTIFICATION
<p>Definition: THE MASTER REQUIREMENT CODES OF THOSE REQUIREMENTS WHICH ARE TECHNICALLY CRITICAL BY REASON OF TOLERANCE, FIT, PERFORMANCE, OR OTHER CHARACTERISTICS WHICH AFFECT IDENTIFICATION OF THE ITEM.</p> <p>Reply Instructions: Enter the Master Requirement Code for the requirement, the reply to which renders the item as being critical. (e.g., CRTLAMATL*; CRTLAMATL\$\$ASURF*)</p> <p>Reply to this requirement only if the header record for the item identification for the item being identified has been coded as critical.</p>			
NOTE FOR MRC PRPY: IF DOCUMENT AVAILABILITY CODE B, D, F, OR H, REPLY TO MRC PRPY.			
ALL* (See Note Above)			
	PRPY	A	PROPRIETARY CHARACTERISTICS

FIIG A013
SECTION I

APP Key	MRC	Mode Code	Requirements
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Definition: IDENTIFICATION OF THOSE CHARACTERISTICS INCLUDED IN THE DESCRIPTION FOR WHICH A NON-GOVERNMENT ACTIVITY HAS IDENTIFIED ALL OR SELECTED CHARACTERISTICS OF THE ITEM AS BEING PROPRIETARY AND THEREFORE RESTRICTED FROM RELEASE OUTSIDE THE GOVERNMENT WITHOUT PRIOR PERMISSION OF THE ORIGINATOR OF THE DATA.

Reply Instructions: Enter the MRC codes of the individual characteristics of the description which are marked proprietary on the technical data, using AND coding (\$\$) for multiple characteristics. If all the MRCs are proprietary, enter the reply PACS. If none of the MRCs is proprietary, enter the reply NPAC. (e.g., PRPYAPACS*; PRPYANPAC*; PRPYAMATL\$\$ASURF*)

NOTE FOR MRC ENAC: ANSWERING THIS MRC WILL GENERATE AN ENAC CODE IN THE ITEM IDENTIFICATION SEGMENT (A) OF THE NSN.

ALL * (See Note Above)

ENAC	D	ENVIRONMENTAL ATTRIBUTE CODE
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Definition: INDICATES THE TYPE OF PRODUCT THAT MEETS OR EXCEEDS THE GOVERNMENT GUIDELINES FOR ENVIRONMENTALLY PREFERRED CHARACTERISTICS.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., ENACDHG*)

<u>REPLY</u> <u>CODE</u>	<u>REPLY (EN02)</u>
HG	<i>ENERGY EFFICIENT – ENERGY STAR - HEATING AND COOLING - FURNACES</i>

ALL*

ELRN	G	EXTRA LONG REFERENCE NUMBER
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Definition: A REFERENCE NUMBER EXCEEDING 32 POSITIONS.

Reply Instructions: Enter the entire reference number. Do not include the 5-position Commercial and Government Entity (CAGE) Code unless there is more than one extra long reference number on the NSN, (e.g., ELRNGANN112036BIL060557LEN313605UZ62365*).

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SECTION I

APP Key	MRC	Mode Code	Requirements
<p>If there is more than one extra long reference number on the NSN, include the CAGE or NCAGE and separate each reference by using the "&" character, (e.g., 28480 ANN112036BIL060557LEN313605UZ62365 & S1234 NN112036BIL060557LEN313605UZ62365).</p> <p>In determining quantity of characters in the reference number, count will be made after modification in accordance with Volume 2, Chapter 9, FLIS Procedures Manual, DoD 4100.39-M.</p>			
ALL*			
	ELCD	D	EXTRA LONG CHARACTERISTIC DESCRIPTION
Definition: A DESCRIPTION THAT EXCEEDS 5000 CHARACTERS.			
Reply Instructions: Enter the Reply Code from the table below. (e.g., ELCDDA*)			
		<u>REPLY CODE</u> A	<u>REPLY (AN58)</u> ADDITIONAL DESCRIPTIVE DATA ON MANUAL RECORD

SECTION III

APP Key	MRC	Mode Code	Requirements
ALL			
	CBME	J	CUBIC MEASURE
Definition: A MEASUREMENT OF VOLUME TAKEN BY MULTIPLYING THE LENGTH BY THE WIDTH BY THE HEIGHT OF AN ITEM AND RENDERED IN CUBIC UNITS.			
Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the numeric value. (e.g., CBMEJCF10.25*; CBMEJCM0.29*)			
		<u>REPLY CODE</u>	<u>REPLY (AN76)</u>

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APP

Key MRC Mode Code Requirements

CF	CUBIC FEET
CM	CUBIC METERS

ALL

BBRG D STORAGE TYPE

Definition: INDICATES THE TYPE OF STORAGE SPACE REQUIRED FOR AN ITEM IN ORDER TO PROVIDE THE DEGREE OF PROTECTION NECESSARY TO MAINTAIN SERVICEABILITY STANDARDS.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., BBRGDAD*; BBRGDAH\$DBD*)

<u>REPLY CODE</u>	<u>REPLY (AM81)</u>
AC	CLOSED SHED
AD	CONTROLLED HUMIDITY WAREHOUSE
AM	DEHUMIDIFIED WAREHOUSE
AE	GENERAL PURPOSE WAREHOUSE
AN	HEATED WAREHOUSE
AH	OPEN SHED
BD	OPEN STORAGE
AJ	UNHEATED WAREHOUSE

ALL

BBRH J INSPECTION FREQUENCY

Definition: THE SPECIFIED TIME INTERVAL, FROM RECEIPT, NECESSARY TO DETECT MATERIAL DETERIORATION THAT WILL AFFECT STOCK READINESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., BBRHJMHAB6*; BBRHJMHAB5\$\$JMHAC6*)

Table 1

<u>REPLY CODE</u>	<u>REPLY (AH68)</u>
DY	DAYS
MH	MONTHS

Table 2

<u>REPLY CODE</u>	<u>REPLY (AM82)</u>
AB	FIRST INSPECTION
AC	REINSPECTION

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APP Key	MRC	Mode Code	Requirements
------------	-----	-----------	--------------

ALL

PRMT	D	PRECIOUS MATERIAL
------	---	-------------------

Definition: IDENTIFICATION OF THE PRECIOUS MATERIAL CONTAINED IN THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., PRMTDAGA000*; PRMTDAUA000\$\$DAGA000*; PRMTDAGA000\$DAUA000*)

REPLY CODE

AUA000
IRA000
AZA000
PDA000
PTA000
RHA000
RTA000
AGA000

REPLY (MA01)

GOLD
IRIDIUM
OSMIUM
PALLADIUM
PLATINUM
RHODIUM
RUTHENIUM
SILVER

ALL

PMWT	J	PRECIOUS MATERIAL AND WEIGHT
------	---	------------------------------

Definition: AN INDICATION OF THE PRECIOUS MATERIAL CONTAINED IN THE ITEM, AND THE AMOUNT PER A MEASUREMENT SCALE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. Enter multiple replies in Table 1 sequence. (e.g., PMWTJPTA000R0.780*; PMWTJAUA000F0.500\$\$JAGA000R0.780*)

Table 1

REPLY CODE

AUA000
IRA000
AZA000
PDA000
PTA000
RHA000
RTA000
AGA000

REPLY (MA01)

GOLD
IRIDIUM
OSMIUM
PALLADIUM
PLATINUM
RHODIUM
RUTHENIUM
SILVER

Table 2

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APP

Key	MRC	Mode Code	Requirements
		<u>REPLY CODE</u>	<u>REPLY (AG14)</u>
		E	GRAINS, TROY
		R	GRAMS
		F	OUNCES, TROY

ALL

PMLC J PRECIOUS MATERIAL AND LOCATION

Definition: AN INDICATION OF THE PRECIOUS MATERIAL AND ITS LOCATION IN THE ITEM.

Reply Instructions: Enter the applicable REPLY CODE from the table below, followed by the location in clear text. (e.g., PMLCJUAUA000TERMINALS*; PMLCJUAUA000TERMINALS\$\$JAGA000INTERNAL SURFACES*; PMLCJAGA000TERMINALS\$JUAUA000INTERNAL SURFACES*)

<u>REPLY CODE</u>	<u>REPLY (MA01)</u>
AUA000	GOLD
IRA000	IRIDIUM
AZA000	OSMIUM
PDA000	PALLADIUM
PTA000	PLATINUM
RHA000	RHODIUM
RTA000	RUTHENIUM
AGA000	SILVER

ALL

SUPP G SUPPLEMENTARY FEATURES

Definition: CHARACTERISTICS OR QUALITIES OF AN ITEM, NOT COVERED IN ANY OTHER REQUIREMENT, WHICH ARE CONSIDERED ESSENTIAL INFORMATION FOR ONE OR MORE FUNCTIONS EXCLUDING NSN ASSIGNMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SUPPGMAY INCL HOLE IN UPPER SUPPORT FOR MTG DURING SHIPMENT*)

ALL

FCLS A FUNCTIONAL CLASSIFICATION

APP

Key	MRC	Mode Code	Requirements
-----	-----	-----------	--------------

Definition: THE ALPHA-NUMERIC DESIGNATION THAT IDENTIFIES THE CLASSIFICATION OF THE ITEM ACCORDING TO THE CATEGORY OF FUNCTIONS PERFORMED.

Reply Instructions: Enter the reply from the applicable document.

(e.g., FCLSAHH-1.5*)

ALL

FTLD	G	FUNCTIONAL DESCRIPTION
------	---	------------------------

Definition: DESCRIBES THE CAPABILITIES, INTENDED USE, AND/OR PURPOSE FOR WHICH THE ITEM IS PROVIDED.

Reply Instructions: Enter description of function as concisely as possible. (e.g., FTLDGUSED TO INSTALL/REMOVE ENGINE NACELLE*)

ALL

TMDN	A	TYPE/MODEL DESIGNATION
------	---	------------------------

Definition: THE ALPHA-NUMERIC-ALPHA DESIGNATION USED TO IDENTIFY THE TYPE AND/OR MODEL OF THE BASIC ITEM.

Reply Instructions: Enter the appropriate designation data.

(e.g., TMDNAMS-615/M*)

ALL

RTSE	G	RELATIONSHIP TO SIMILAR EQUIPMENT
------	---	-----------------------------------

Definition: INDICATES THE RELATIONSHIP, SUCH AS CONSTRUCTION, CAPABILITIES, AND THE LIKE, OF THE ITEM TO A SIMILAR ITEM.

Reply Instructions: Enter concise statement for similar item including name and identifying data.

(e.g., RTSEGSIMILAR TO LOCKHEED OVERWING ENGINE HOIST P/N 61521-58*)

ALL

RDAL	G	REFERENCE DATA AND LITERATURE
------	---	-------------------------------

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APP Key	MRC	Mode Code	Requirements
------------	-----	-----------	--------------

Definition: LITERATURE AND REFERENCES AVAILABLE FOR INFORMATION PERTAINING TO THE ITEM.

Reply Instructions: Enter data appropriate and in a concise manner to identify informational references covering the item.

(e.g., RDALGNAAVAIROIA/VFK58 A-2.2.9*)

ALL

NTRD	A	ENTRY DATE
------	---	------------

Definition: INDICATES THE DATE THE ITEM WAS ENTERED INTO MIL-HDBK-300.

Reply Instructions: Enter the date structured in three hyphenated 2 position segments to indicate the last 2 digits of the calendar year, month, and day.

(e.g., NTRDA80-05-28*)

ALL

ZZZP	J	PURCHASE DESCRIPTION IDENTIFICATION
------	---	-------------------------------------

Definition: THE CONTROLLING ACTIVITY AND IDENTIFICATION OF A DOCUMENT USED IN LIEU OF A SPECIFICATION IN THE PROCUREMENT OF AN ITEM OF SUPPLY.

Reply Instructions: Enter the 5-position Commercial and Government Entity (CAGE) Code, followed by a dash and the identifying number of the document.

(e.g., ZZZPJ81A37-30624A*)

A, B, D, E, F, H, J

ABFH	G	FLUE CONNECTION LOCATION
------	---	--------------------------

Definition: INDICATES THE LOCATION OF THE FLUE CONNECTION.

Reply Instructions: Enter the reply in clear text. (e.g., ABFHGON RIGHT SIDE 18 IN. FROM FLOOR*)

ALL

AGAV	G	END ITEM IDENTIFICATION
------	---	-------------------------

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APP			
Key	MRC	Mode Code	Requirements

Definition: THE NATIONAL STOCK NUMBER OR THE IDENTIFICATION INFORMATION OF THE END EQUIPMENT FOR WHICH THE ITEM IS A PART.

Reply Instructions: Enter the reply in clear text.

(e.g., AGAVG3930-00-000-0000*;

AGAVGFORKLIFT TRUCK, SMITH CORPORATION, MODEL 12, TYPE A*)

ALL

HZRD	D	HAZARDOUS SUBSTANCES
------	---	----------------------

Definition: THE SUBSTANCES AND/OR MATERIALS CONTAINED IN THE ITEM THAT HAVE BEEN IDENTIFIED AS HAZARDOUS OR ENVIRONMENTALLY DAMAGING BY THE ENVIRONMENTAL PROTECTION AGENCY OR OTHER AUTHORIZED GOVERNMENT AGENCY.

Reply Instructions: Enter the applicable REPLY CODE from the table below. (e.g., HZRDDHAZ008*; HZRDDHAZ008\$\$DHAZ029*)

<u>REPLY CODE</u>
HAZ008
HAZ029

<u>REPLY (HZ00)</u>
CADMIUM
LEAD

ALL*

CXCY	G	PART NAME ASSIGNED BY CONTROLLING AGENCY
------	---	--

Definition: THE NAME ASSIGNED TO THE ITEM BY THE GOVERNMENT AGENCY OR COMMERCIAL ORGANIZATION CONTROLLING THE DESIGN OF THE ITEM.

Reply Instructions: Enter the reply in clear text. (e.g., CXCYGLINE PROCESSOR CONTROL BOARD*)

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Table 1 - FUEL TYPES
FUEL TYPES

<u>REPLY CODE</u>	<u>REPLY (AF80)</u>
AE	BUTANE (bottled gas)
AR	DF-A ARCTIC DIESEL FUEL OIL
AS	DF-1 WINTER DIESEL FUEL OIL
AT	DF-2 REGULAR DIESEL FUEL OIL
AU	DF-4 HEAVY DIESEL FUEL OIL
CG	DIESEL FUEL OIL
AL	FS NO. 1 BURNER FUEL OIL
AM	FS NO. 2 BURNER FUEL OIL
AN	FS NO. 4 BURNER FUEL OIL
AP	FS NO. 5 BURNER FUEL OIL
AQ	FS NO. 6 BURNER FUEL OIL
BT	FUEL OIL
BC	GASOLINE
AG	JP-3 JET FUEL
AH	JP-4 JET FUEL
AJ	JP-5 JET FUEL
AK	JP-6 JET FUEL
AC	KEROSENE
CH	MULTIFUEL
AD	NATURAL GAS
AF	PROPANE
AB	SOLID FUEL (coal, coke, wood, charcoal, etc.)
AV	80/87 OCTANE GASOLINE
AW	91/96 OCTANE GASOLINE
AX	100/130 OCTANE GASOLINE
AY	115/145 OCTANE GASOLINE

Table 2 - MOUNTING TYPES
MOUNTING TYPES

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<u>REPLY CODE</u>	<u>REPLY (AA78)</u>
A	ANY ACCEPTABLE
ACG	BASEBOARD (floor perimeter)
ACE	BENCH
ACH	CEILING PANEL (as part of ceiling)
ACJ	CEILING RECESSED (thru and above ceiling)
ACK	CEILING SUSPENDED (hanging below ceiling or roof)
ACL	FLOOR RECESSED (thru floor and suspended below)
ACM	FLOOR SURFACE, FREE STANDING, DUCTED
ACN	FLOOR SURFACE, FREE STANDING, NONDUCTED
ACP	FLOOR-WALL (standing, wall attached)
AAF	HAND CARRY
AAK	SKID
AAM	TRAILER
ACQ	UNDER SEAT
ACR	VENTILATION DUCT (in existing duct work)
ACS	WALL PANEL (as part of wall)
ACT	WALL RECESSED, ROOM INTERIOR
ACW	WALL RECESSED, ROOM INTERIOR, OUTSIDE WALL
ACX	WALL SUSPENDED, ROOM EXTERIOR, THROUGH WALL
ACY	WALL SUSPENDED, ROOM INTERIOR
AAP	WHEEL (self-wheeled)

Table 3 - SPEED ADJUSTMENTS
SPEED ADJUSTMENTS

<u>REPLY CODE</u>	<u>REPLY (AB03)</u>
H	EIGHT SPEED
E	FIVE SPEED
D	FOUR SPEED
J	NINE SPEED
G	SEVEN SPEED
A	SINGLE SPEED
F	SIX SPEED
C	THREE SPEED
B	TWO SPEED
K	0 TO FULL SPEED (rheostat regulated)

Table 4 - HEAT DIRECTING DEVICES
HEAT DIRECTING DEVICES

<u>REPLY CODE</u>	<u>REPLY (AB01)</u>
D	ADJUSTABLE CONE DIFFUSER
B	ADJUSTABLE LOUVER
N	DIRECTIONAL GRILLE
C	FIXED LOUVER
L	FLEXIBLE DUCTS

<u>REPLY CODE</u>	<u>REPLY (AB01)</u>
G	FOUR CONE DIFFUSER
P	HINGED DOOR
H	JET NOZZLE
J	RADIAL DIFFUSER-VERTICAL VANES
K	RADIAL DIFFUSER-45 DEG VANES
E	SINGLE FIXED CONE DIFFUSER
F	THREE CONE DIFFUSER

Table 5 - SURFACE TREATMENTS
SURFACE TREATMENTS

<u>REPLY CODE</u>	<u>REPLY (SF01)</u>
ANA000	ANODIZE
A	ANY ACCEPTABLE
CDA000	CADMIUM
CLB000	CERAMIC
CMB000	CHROMATE ZINC
CRA000	CHROMIUM
CUA000	COPPER
ENA000	ENAMEL
AUA000	GOLD
LQA000	LACQUER
PBA000	LEAD
NLA000	NICKEL
XXB000	OXIDE
PNA000	PAINT
PDA000	PALLADIUM
PSA000	PASSIVATE
PCA000	PLASTIC
CLC000	PORCELAIN
PRA000	PRIMER
RHA000	RHODIUM
AGA000	SILVER
SRA000	SOLDER
SNA000	TIN
VAA000	VARNISH
ZNA000	ZINC

Table 6 - NONDEFINITIVE SPEC/STD DATA
NONDEFINITIVE SPEC/STD DATA

<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
AL	ALLOY
AN	ANNEX
AP	APPENDIX
AC	APPLICABILITY CLASS

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<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
AR	ARRANGEMENT
AS	ASSEMBLY
AB	ASSORTMENT
BX	BOX
CY	CAPACITY
CA	CASE
CT	CATEGORY
CL	CLASS
CE	CODE
CR	COLOR
CC	COMBINATION CODE
CN	COMPONENT
CP	COMPOSITION
CM	COMPOUND
CD	CONDITION
CS	CONSTRUCTION
DE	DESIGN
DG	DESIGNATOR
DW	DRAWING NUMBER
EG	EDGE
EN	END
FY	FAMILY
FG	FIGURE
FN	FINISH
FM	FORM
FA	FORMULA
GR	GRADE
GP	GROUP
BA	IMAGE COLOR
NS	INSERT
TM	ITEM
KD	KIND
KT	KIT
LG	LENGTH
LT	LIMIT
MK	MARK
AA	MARKER
ML	MATERIAL
BB	MAXIMUM DENSITY
MH	MESH
ME	METHOD
BC	MINIMUM DENSITY
MD	MODEL
MT	MOUNTING
NR	NUMBER
PT	PART
PN	PATTERN
PC	PHYSICAL CONDITION

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<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
PS	PIECE
PL	PLAN
PR	POINT
QA	QUALITY
RN	RANGE
RT	RATING
RF	REFERENCE NUMBER
SC	SCHEDULE
SB	SECTION
SL	SELECTION
SE	SERIES
SV	SERVICE
SX	SET
SA	SHADE
SH	SHAPE
SG	SHEET
SZ	SIZE
PZ	SPECIES
SQ	SPECIFICATION SHEET
SD	SPEED
ST	STYLE
SS	SUBCLASS
SF	SUBFORM
SP	SUBTYPE
SN	SURFACE CONDITION
SY	SYMBOL
SM	SYSTEM
TB	TABLE
TN	TANNAGE
TP	TEMPER
TX	TEXTURE
TK	THICKNESS
TT	TREATMENT
TR	TRIM
TY	TYPE
YN	UNIT
VA	VARIETY
WT	WEIGHT
WD	WIDTH

Reference Drawing Groups

No table of contents entries found.

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BTU DETERMINATIONS AND CONVERSIONS

1. To determine the wattage rating of an electrical heater, you must divide the rated BTUH by 3.412 since the BTUH and wattage are in proportion. (NOTE:) The greater the BTUH, the greater the wattage; the lower the BTUH, the lower the wattage.)

EXAMPLE:

A. Wattage Determination

$$\text{BTUH} = \text{Watts} / 3.412$$

B. BTUH Determination

$$\text{Watts} \times 3.412 = \text{BTUH}$$

$$1000 \text{ Watts} = 3412 \text{ BTUH}$$

$$1 \text{ Watt} = 3.412 \text{ BTUH}$$

AC OR DC

C. $\text{Amps} = \text{Watts} / \text{Voltage}$

D. $\text{Watts} = \text{Amps} \times \text{Voltage}$

E. $\text{Voltage} = \text{Watts} / \text{Amps}$

F. $745.2 \text{ Watts} = 1 \text{ hp}$

2. In EDR (Equivalent Direct Radiation) ratings, one square foot is equal to 240 BTUH.

3. A kilogram-calorie, is a thermal unit based on the metric system, designating the amount of heat required for raising the temperature of one kilogram of pure water one degree C.

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A British Thermal Unit, is a thermal unit adopted in the English-speaking Countries, designating the amount of heat required for raising the temperature of one kilogram of pure water on degree F.

To convert from the metric system of heat unit measurement to BTUH, divide the metric system of heat unit (kilogram-calorie) by 3.968.

To convert British Thermal Units to kilogram-calories, multiply the BTU by 0.252.

BTU DETERMINATIONS AND CONVERSIONS

The following chart shows the variation between U.S. and British Imperial measures of volume and capacity.

<u>UNIT</u>	<u>U.S.</u>	<u>BRITISH</u>
GALLON	3.78543	4.54596
QUART	0.9462	1.13649
PINT	0.4731	0.56824

To convert British Imperial gallons to U.S. gallons, use the following formula:

AMPERAGE CONVERSION TABLE

<u>WATTS</u>	<u>VOLTS</u>	<u>WATTS</u>										
<u>110</u>	<u>115</u>	<u>118</u>	<u>120</u>	<u>220</u>	<u>230</u>	<u>236</u>	<u>240</u>	<u>440</u>	<u>460</u>	<u>480</u>		
100	.91	.87	.85	.83	.46	.44	.43	.42	.23	.22	.21	100
150	1.36	1.30	1.27	1.25	.68	.65	.64	.63	.34	.33	.31	150
200	1.82	1.74	1.69	1.67	.91	.87	.85	.83	.45	.43	.42	200
250	2.27	2.17	2.12	2.08	1.14	1.09	1.06	1.04	.57	.54	.52	250
300	2.72	2.61	2.54	2.50	1.36	1.30	1.27	1.25	.68	.65	.63	300
350	3.18	3.04	2.97	2.92	1.59	1.53	1.48	1.46	.80	.76	.73	350
400	3.63	3.48	3.39	3.33	1.82	1.74	1.70	1.67	.91	.87	.83	400

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<u>WATTS</u>	<u>VOLTS</u>	<u>WATTS</u>										
<u>110</u>	<u>115</u>	<u>118</u>	<u>120</u>	<u>220</u>	<u>230</u>	<u>236</u>	<u>240</u>	<u>440</u>	<u>460</u>	<u>480</u>		
450	4.09	3.91	3.81	3.75	2.05	1.96	1.91	1.88	1.02	.98	.94	450
500	4.54	4.35	4.24	4.17	2.27	2.17	2.12	2.08	1.14	1.09	1.04	500
600	5.45	5.22	5.08	5.00	2.73	2.61	2.54	2.50	1.36	1.30	1.25	600
700	6.38	6.09	5.93	5.83	3.18	3.04	2.97	2.92	1.59	1.52	1.46	700
750	6.80	6.52	6.36	6.25	3.40	3.26	3.18	3.13	1.70	1.63	1.56	750
800	7.27	6.96	6.78	6.67	3.64	3.48	3.39	3.33	1.82	1.74	1.67	800
900	8.18	7.83	7.63	7.50	4.09	3.91	3.81	3.75	2.05	1.96	1.88	900
1000	9.09	8.69	8.47	8.33	4.55	4.35	4.24	4.17	2.27	2.17	2.08	1000
1100	10.0	9.56	9.32	9.17	5.00	4.78	4.66	4.58	2.50	2.39	2.29	1100
1200	10.9	10.4	10.2	10.0	5.45	5.22	5.08	5.00	2.73	2.61	2.50	1200
1250	11.4	10.9	10.6	10.4	5.68	5.43	5.30	5.21	2.84	2.72	2.60	1250
1300	11.3	11.3	11.0	10.8	5.91	5.65	5.51	5.42	2.95	2.83	2.71	1300
1400	12.7	12.2	11.9	11.7	6.36	6.09	5.93	5.83	3.18	3.04	2.92	1400
1500	13.6	13.0	12.7	12.5	6.82	6.52	6.40	6.25	3.41	3.26	3.13	1500
1600	14.6	13.9	13.6	13.3	7.27	6.96	6.78	6.67	3.64	3.48	3.33	1600
1700	15.5	14.8	14.4	14.2	7.73	7.39	7.20	7.08	3.86	3.70	3.54	1700
1800	16.4	15.7	15.3	15.0	8.18	7.83	7.63	7.50	4.09	3.91	3.75	1800
1900	17.3	16.5	16.1	15.8	8.64	8.26	8.05	7.92	4.32	4.13	3.96	1900
2000	18.2	17.4	16.9	16.7	9.09	8.70	8.47	8.33	4.55	4.35	4.17	2000
2200	20.0	19.1	18.6	18.3	10.0	9.57	9.32	9.17	5.00	4.78	4.58	2200
2500	22.7	21.7	21.2	20.8	11.4	10.9	10.6	10.4	5.68	5.43	5.21	2500
2750	25.0	23.9	23.3	23.0	12.5	12.0	11.7	11.5	6.25	5.98	5.73	2750
3000	27.2	26.1	25.4	25.0	13.6	13.0	12.7	12.5	6.82	6.52	6.25	3000
3500	31.8	30.4	29.7	29.2	15.9	15.3	14.8	14.6	7.95	7.61	7.29	3500
4000	36.3	34.8	33.9	33.3	18.2	17.4	17.0	16.7	9.10	8.70	8.33	4000
4500	40.9	39.1	38.1	37.5	20.5	19.6	19.1	18.8	10.2	9.73	9.38	4500
5000	45.4	43.5	42.4	41.7	22.7	21.7	21.2	20.8	11.4	10.9	10.4	5000
6000	54.5	52.2	50.8	50.0	27.3	26.1	25.4	25.0	13.6	13.0	12.5	6000
7000	63.6	60.9	59.3	58.3	31.8	30.4	29.7	29.2	15.9	15.2	14.6	7000
8000	72.7	69.6	67.8	66.7	36.4	34.8	33.9	33.3	18.2	17.4	16.7	8000
9000	81.8	78.3	76.3	75.0	40.9	39.1	38.1	37.5	20.5	19.6	18.8	9000
10000	90.9	86.9	84.7	83.3	45.5	43.5	42.4	41.7	22.7	21.7	20.8	10000

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APPENDIX C

STANDARD FRACTION TO DECIMAL CONVERSION CHART

<u>4ths</u>	<u>8ths</u>	<u>16ths</u>	<u>32nds</u>	<u>64ths</u>	<u>To 3</u>	<u>To 4</u>	<u>4ths</u>	<u>8ths</u>	<u>16ths</u>	<u>32nds</u>	<u>64ths</u>	<u>To 3</u>	<u>To 4</u>
				1/64	.016	.0156					33/64	.516	.5156
			1/32	-----	.031	.0312				17/32	-----	.531	.5312
				3/64	.047	.0469					35/64	.547	.5469
		1/16	-----		.062	.0625			9/16	-----	-----	.562	.5625
				5/64	.078	.0781					37/64	.578	.5781
			3/32	-----	.094	.0938				19/32	-----	.594	.5938
				7/64	.109	.1094					39/64	.609	.6094
	1/8	-----	-----	-----	.125	.1250		5/8	-----	-----	-----	.625	.6250
				9/64	.141	.1406					41/64	.641	.6406
			5/32	-----	.156	.1562				21/32	-----	.656	.6562
				11/64	.172	.1719					43/64	.672	.6719
		3/16	-----	-----	.188	.1875			11/16	-----	-----	.688	.6875
				13/64	.203	.2031					45/64	.703	.7031
			7/32	-----	.219	.2188				23/32	-----	.719	.7188
				15/64	.234	.2344					47/64	.734	.7344
1/4	-----	-----	-----	-----	.250	.2500	3/4	-----	-----	-----	-----	.750	.7500
				17/64	.266	.2656					49/64	.766	.7656
			9/32	-----	.281	.2812				25/32	-----	.781	.7812
				19/64	.297	.2969					51/64	.797	.7969
		5/16	-----	-----	.312	.3125			13/16	-----	-----	.812	.8125
				21/64	.328	.3281					53/64	.828	.8281
			11/32	-----	.344	.3438				27/32	-----	.844	.8438
				23/64	.359	.3594					55/64	.859	.8594
	3/8	-----	-----	-----	.375	.3750		7/8	-----	-----	-----	.875	.8750
				25/64	.391	.3906					57/64	.891	.8906
			13/32	-----	.406	.4062				29/32	-----	.906	.9062
				27/64	.422	.4219					59/64	.922	.9219
		7/16	-----	-----	.438	.4375			15/16	-----	-----	.938	.9375
				29/64	.453	.4531					61/64	.953	.9531
			15/32	-----	.469	.4688				31/32	-----	.969	.9688
				31/64	.484	.4844					63/64	.984	.9844
					.500	.5000						1.000	1.0000

FIIG Change List

FIIG Change List, Effective October 2, 2009

Revised Reply for Reply Code HG for MRC ENAC in Section I.